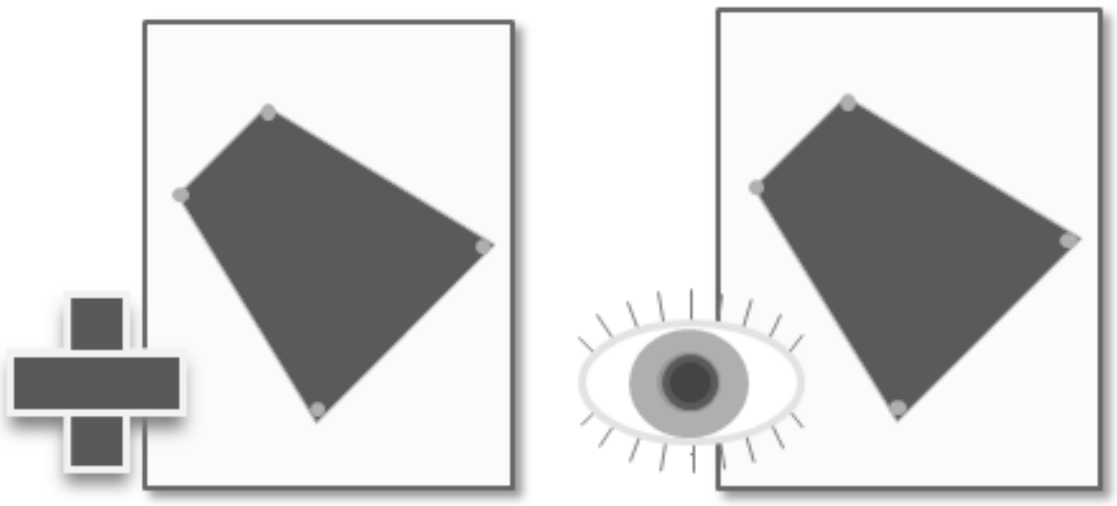
Rangelands NRM
Western Australia

Geographic Reporting and Information Database (GRID)



GRID User Manual

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GAIA RESOURCES
ENVIRONMENTAL
TECHNOLOGY
CONSULTANTS

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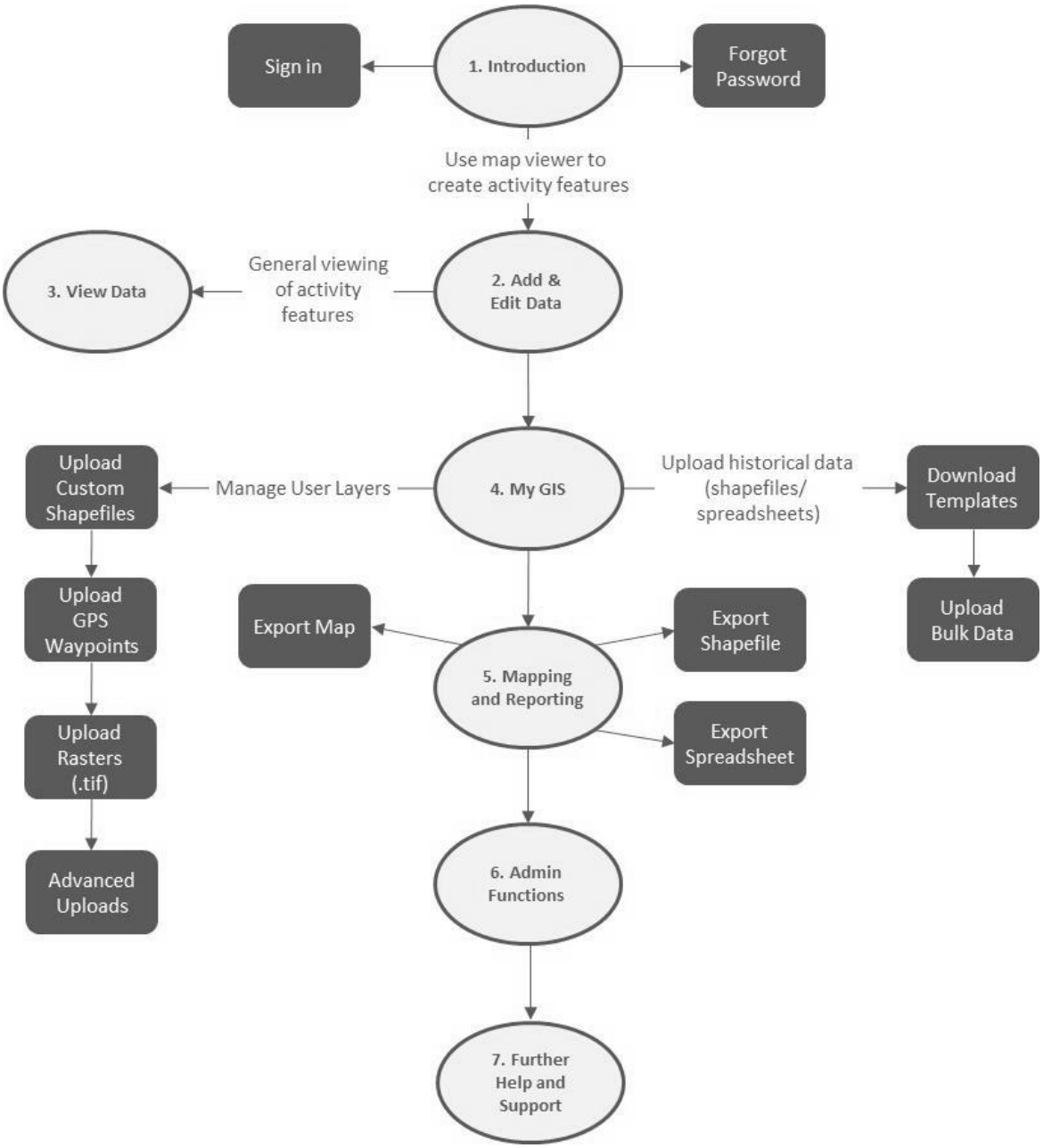
1. INTRODUCTION AND SIGN IN

The Geographical Reporting and Information Database (GRID) is an online GIS reporting tool designed to facilitate efficient, centralised and standardised collation of spatial information. The site is currently in a testing and development phase so if you discover a bug, please email the GRID GIS Administrator (7. FURTHER HELP AND SUPPORT) with the details.

Please download this manual from the GRID **Home** page on a regular basis, or use online, to keep in line with any future updates to the system.

This guide also assumes access to QGIS desktop software and Microsoft Office (Excel) for uploading bulk data (4. MY GIS).

1.1 Chapter selection



1.2 Sign in

1. Navigate to http://rangelands.gaiaresources.com.au and you will go straight to the log in page if you are not already signed in.
2. Your **Username** and **Password** are provided by the GRID GIS administrator (see 7 FURTHER HELP AND SUPPORT for contact details).

1.3 Forgotten password

1. If you have forgotten your password click **Forgot my password**.
2. An email will be sent to your provided email address.
3. Click on the link in the email to create a new password.

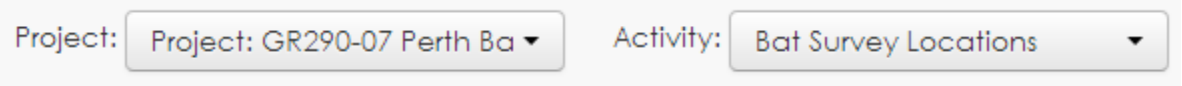
2. ADD AND EDIT DATA

1 From the home screen select the **Add & Edit Data** icon:

2.1 Select your Project and Activity

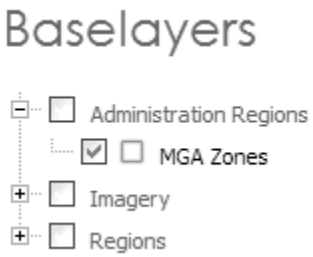
1 Select your **Project**.

2 Select your **Activity**:



3 After selecting an activity the related layer will be checked in the **Table of Contents** to the left of the interactive map:

4 Select the **Baselayers** you would like to display:



2.2 Find your survey area

1 In the interactive map navigate to the area where you would like to capture an activity using the navigation tools found in the top right corner of the map (hover over an icon for a description of the tool). These tools are:

2 **Pan Map**.

3 **Select Feature** (note that you can only use this tool on activities already selected from the dropdown lists – see 2.1 Select your Project and Activity).

4 **Show Info** (works on all features).

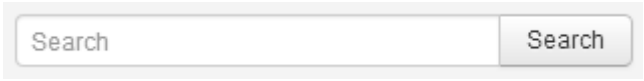
5 **Show Fullscreen**.

6 **Zoom In** and **Zoom Out**.

7 You can also **click and hold** on the map to pan and use the **scroll wheel** to zoom in and out.

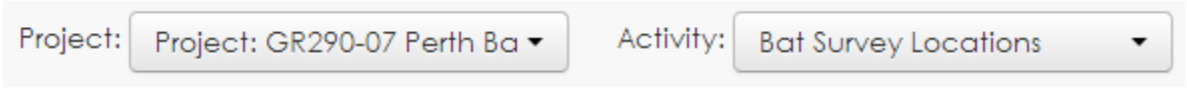
8 Hold the **SHIFT** key down and click to drag a **zoom square** over your area of interest:

9 or use the **Search** box to search for specific attributes within a feature (this will search all fields within an activity – i.e. "Site Name" or "Property Manager" but does not search Baselayer fields).

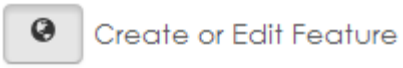


2.3 Add data

1 Ensure your Project and Activity is selected:



2 To start **creating** a feature click **Create or Edit Feature**.



3 Up to four additional icons will appear in the interactive map. The tools shown will vary depending on the activity type:

Draw Polygon.

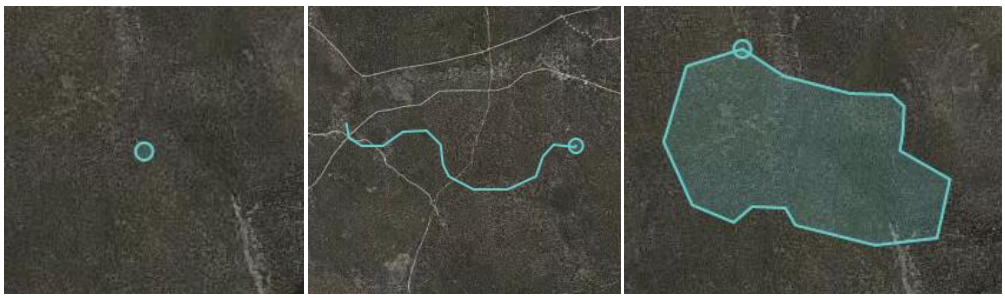
Draw Line.

Draw Point and

Modify Feature.

4 Select one of the draw tools to create a feature:

5 Start drawing by clicking on the map:

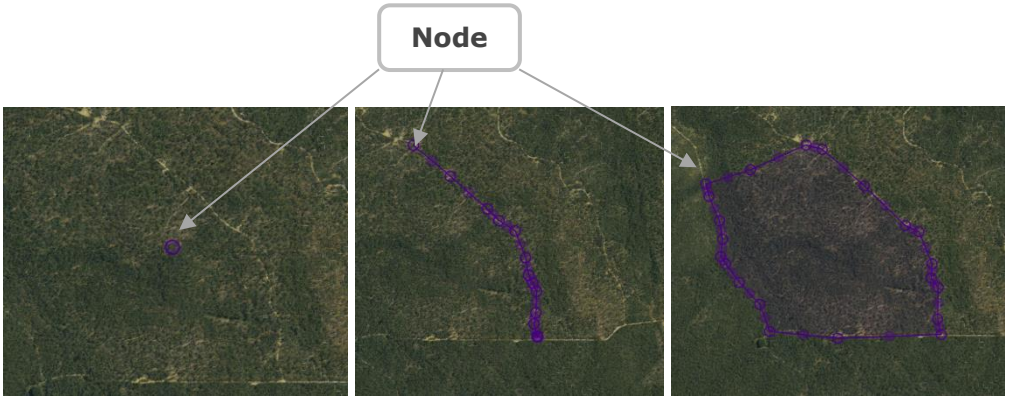


Point example *Line example* *Polygon example*

6 To draw **freehand** (i.e. not having to click once for each node) hold down the shift key, click and hold the left mouse button, and move around the map to create your feature.

7 **Double click** to complete the feature (if drawing a polygon or a line feature in non-freehand mode).

8 The feature will change to purple and **nodes** will display (nodes are indicated as circles on the map):

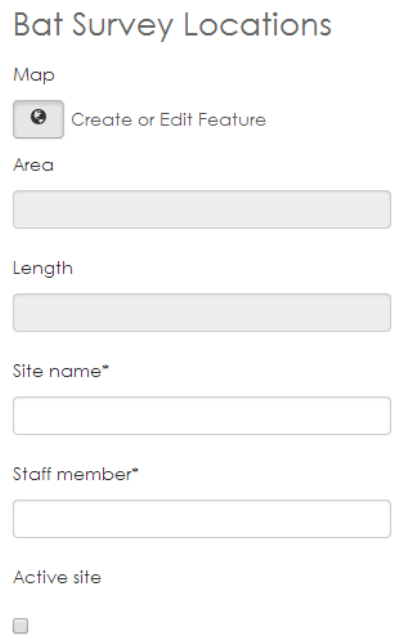


Point example *Line example* *Polygon example*

9 Click and drag a node to **modify** the shape of the feature.

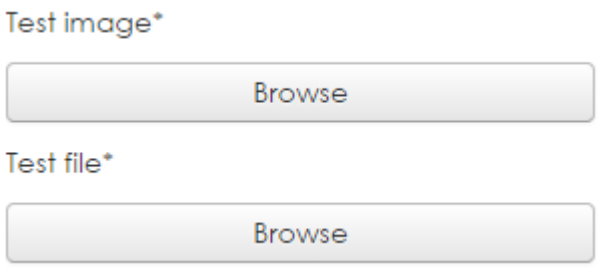
10 To start again and **clear the feature,** click any tool.

11 Once the feature is complete, enter its attributes into the **Activity Fields** to the right of the interactive map:



12 To clear your feature and attributes and start again, click **Clear** at the bottom of the page.

13 If there are 'file' or 'image' fields you can add documents, zip files or image files (.jpg/ .png) by clicking Browse, navigating to your file and clicking Open:



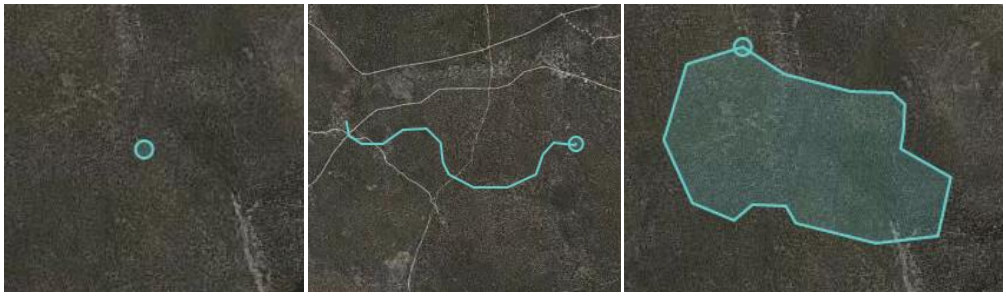
14 Once the feature is created, the attribute fields are populated and the associated files are attached, click **Save.**

15 If you enter the incorrect field type or forget to populate a mandatory field, you will receive a prompt "This field is required" (mandatory fields are indicated by a *):

16 Correct the error and click **Save** again.

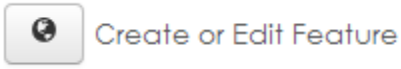
17 Please note that saving may take several minutes to complete. Wait for the **feedback** that your activity has been saved successfully:

18 Once saved, the feature will change to blue - indicating it is selected:



Point example *Line example* *Polygon example*

19 To edit the same feature again, select **Create or Edit Feature**, make your edits, and click **Save** again:



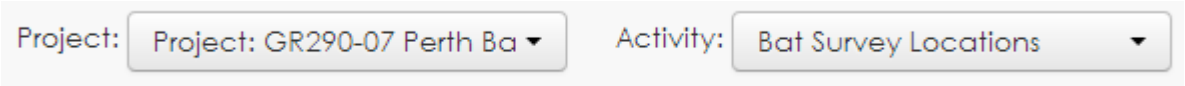
20 To **Delete** the feature, click **Delete**.

21 To create a **new feature** for the **same activity,** click **New** (this will unselect the feature) and then **Create or Edit Feature** to start creating.

22 To create a **new feature** for a **different activity,** start from 2.1 Select your Project and Activity.

2.4 Copy feature

1 Select the **Project** and **Activity** you want to copy a feature to:

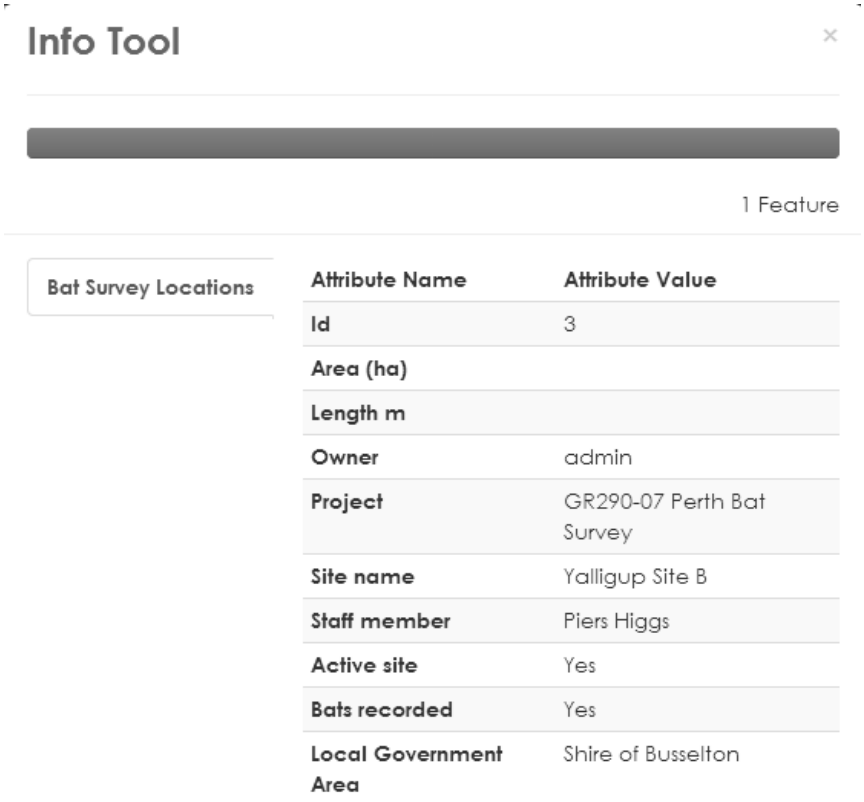


2 Make sure the feature you want to copy is selected in the **Table of Contents**:

3 **Navigate** to the feature you want to copy (the feature can be from any other activity, the activity already selected or, as in this example, a background layer).

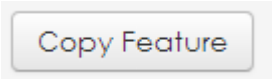
4 Click on the **Info tool** .

5 Click on the feature you want to copy and a popup will appear:



6 If there are multiple layers, select the correct layer from the left of the **Info tool**:

7 Click **Copy Feature** on the bottom of the **Info tool**:

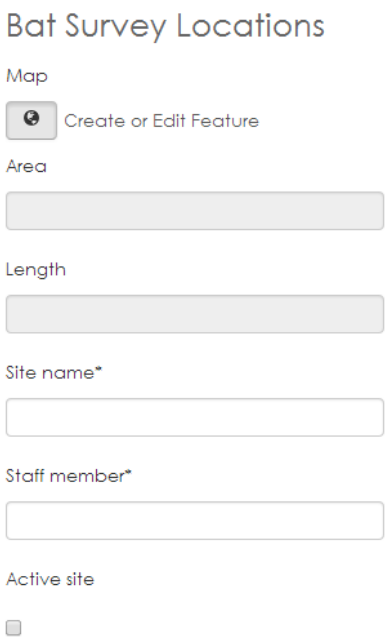


8 The feature you are copying will remain selected with the nodes showing:

Point example *Line example* *Polygon example*

9 Move the **nodes** if necessary to edit the feature.

10 Fill in the **attributes** as required:

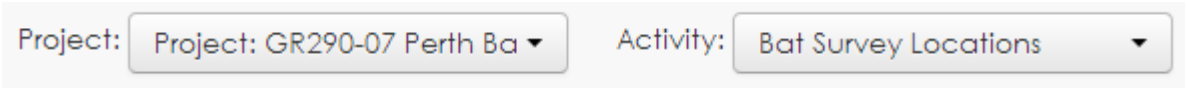


11 To **cancel** the copy click **Clear**.

12 To **finish** the copy click **Save**.

2.5 Edit data

1 Select your **Project** and **Activity**:



2 The activity you select above will be automatically checked in the **Table of Contents**:

3 **Navigate** to, or **Search** for the feature to be edited (See 2.2 Find your Survey Area for navigation tools).

4 Ensure you are modifying the right feature by selecting the **Info tool** and clicking on the feature. A dialog box will display with the activities attribute details.

5 Select the feature using the **Select Feature tool** (features will turn blue when selected):

Point example *Line example* *Polygon example*

Note: This tool will only work on the activity selected from the drop down list.

6 If you are selecting multiple features, a dialog box appears. Click on the feature you want to edit and click **Select.**

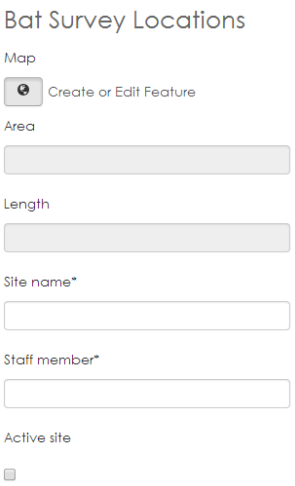
7 To **Edit** the feature click on the **Create or Edit Feature tool**.

8 The **nodes** of the feature will appear:

Point example *Line example* *Polygon example*

9 Click and drag a node to **modify** the shape of the feature.

10 Edit the **attributes** of the activity as necessary:



11 When editing is complete click **Save**.

12 **Wait for the feedback** that the save has been successful before continuing:

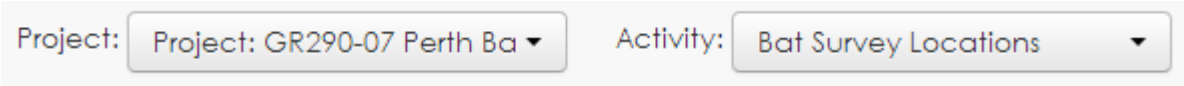
13 To create a **new feature** for the **same activity** click **New** (this will de-select the feature) and then **Create or Edit Feature** to start creating.

14 To **delete** the feature click **Delete**.

15 To create a **new feature** for a **different activity** start from 2.1 Select your Project and Activity.

2.6 Batch edit data

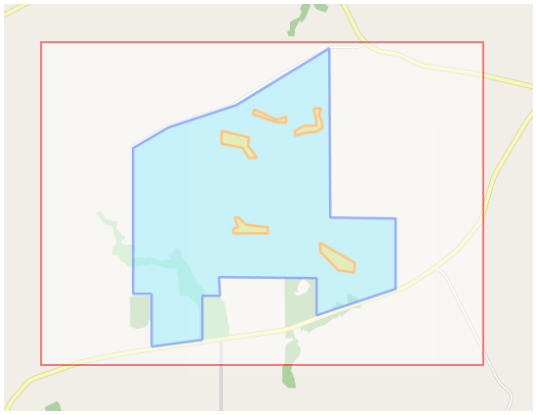
1 Select your **Project and Activity**:



2 Navigate to the extent of all the features you would like to edit in batch.

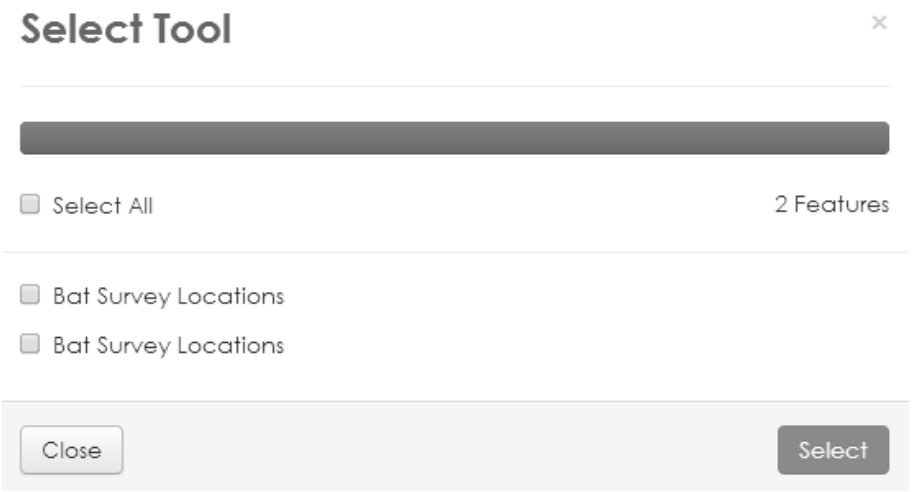
3 Click on the **Select tool** in the map viewer.

4 Click on the map to draw a **square** encompassing all the features you would like to edit:



5 Release the mouse button and a **Select Tool** dialogue box appears.

6 Select the **individual features** you wish to edit, or use **Select All** to edit all features (features will turn blue when selected):



7 Click **Select**.

8 Note that an **Update check box** appears next to all attributes on the right of the map:

9 Check the box for each feature you want to update and change the corresponding attributes as required.

10 Click **Save** to submit the changes or clicking **Delete All** will delete all selected features.

11 Click **New** to end batch editing.

Note: Exercise extreme caution when deleting multiple features, this information cannot be retrieved.

12 **Optional** - To change multiple feature geometries into one new feature, select multiple features and then check **Update Feature** next to the **Create or Edit Feature tools**:

13 Click **Create or Edit Feature** to create the new feature.

14 **Draw** the new feature in the map viewer (See 2.3 Add Data for creating features).

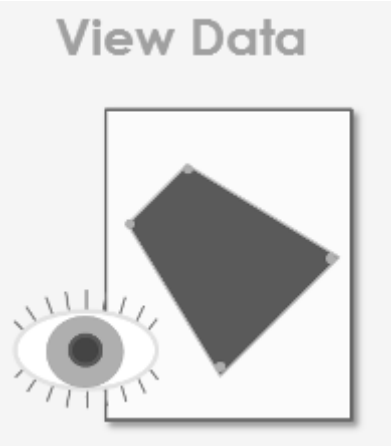
15 Click **Save**.

Note: Use with caution as this will create multiple features with exactly the same geometry stacked on top of each other.

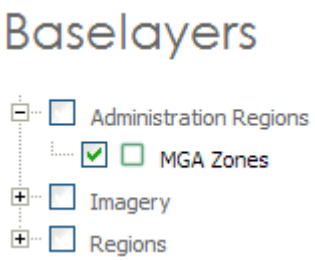
3. VIEW DATA

This page is for top level interrogation of all activity data.

1 From the home page click on the **View Data** icon:



2 Select the **Baselayers** you would like to display in the **Table of Contents**.



3 Use the navigation tools in the interactive map to navigate to an area where you would like to view activities:

4 **Pan Map**.

5 **Show Full Screen**.

6 **Zoom In** and **Zoom Out**.

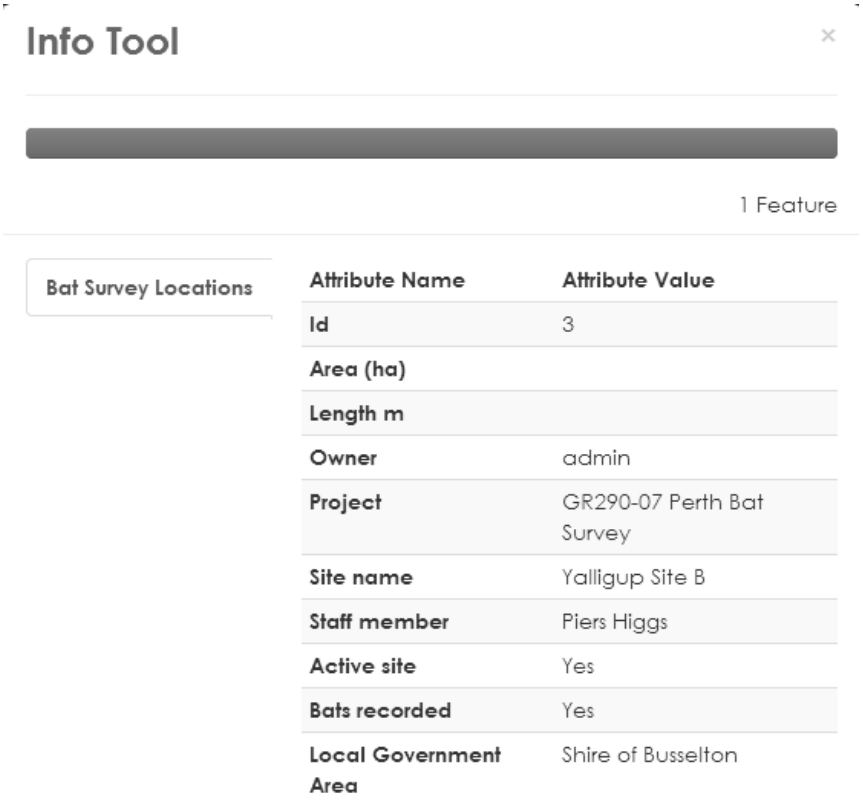
7 You can also **click and hold** on the map to pan and use the **scroll wheel** to zoom in and out.

8 or hold the **Shift** key down and click to drag a **zoom square** over your area of interest:

6 Select the activities you would like to view in the interactive map by checking them in the **Table of Contents**:

7 Interrogate the activity features using the **Info** tool.

8 A dialog box will appear showing the features **attributes**:



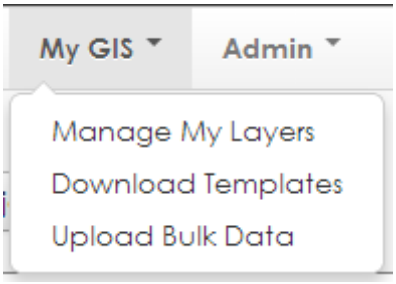
9 If you select **multiple** features at a time, a dialog box will appear with all features tabulated to the left of the dialog box.

10 Clicking on a tab will also **highlight the feature blue** in the map viewer so it can be easily located.

4. MY GIS

My GIS allows you to add and manage your own layers and provides functionality to upload historical data using shapefile or spreadsheet templates.

1 From the toolbar click on the **My GIS** menu:

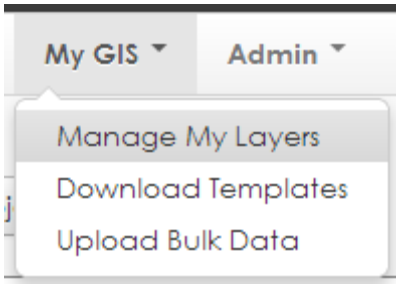


4.1 Manage User Layers

Manage User Layers allows you to add your own layers that are not specifically part of a Project. For example, you can add your own shapefile to copy the geometry over to your activity feature, or add your GPS points to ground-truth your activity location.

4.1.1 Upload shapefiles to User Layers

1 Click on **Manage User Layers** from the **MY GIS** menu:



2 Click on **Add Layer**.

3 Choose **ESRI Shapefile** from the list of tabs:

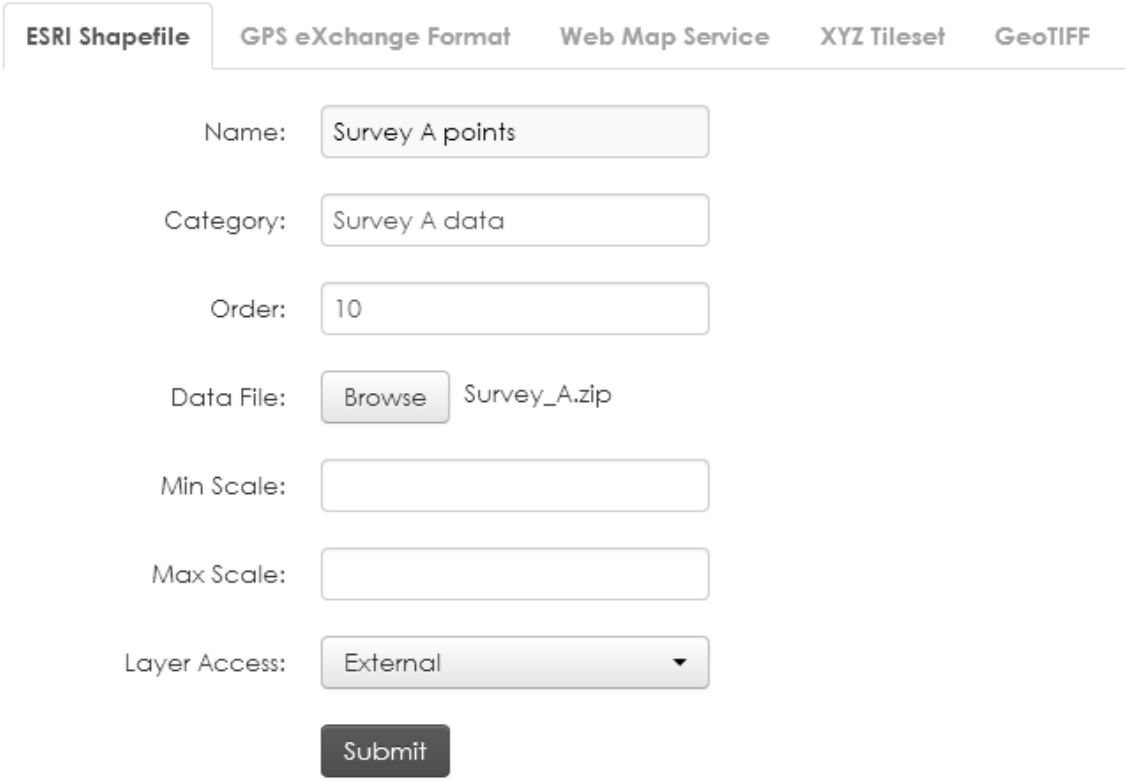
4 Complete the following fields:

- **Name** The name for the data you want to see in GRID (i.e. Survey A points)
- **Category** How you want the data to be categorised in GRID (i.e. Survey A data)
- **Order** The order you would like the layers to display in the table of contents under the category specified
- **Data File** Click the **Browse** button and navigate to your shapefile and click **Open** (all the shapefile components must be zipped into a single .zip file)

  Note: Your shapefile name must not contain **spaces** (i.e. "My_Shapefile.shp" not "My Shapefile.shp") or **special characters** (i.e. ~!@#$%^&*()_+{}|:"<>?`[]\;',./)

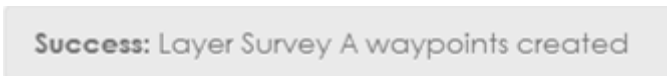
Ensure all data loaded into User Layers have **unique names**

- **Min Scale** (optional) The minimum scale that you wish your data to display on the map
- **Max Scale** (optional) The maximum scale that you wish your data to display on the map
- **Layer Access:** In **Activity** and **Base Layers**, **Layer Access** defines the levels of user who can see the data. As this option does not have any implications in the User Layers, it can be left as the default of internal (see 6.12 Internal, External and Public permission levels)

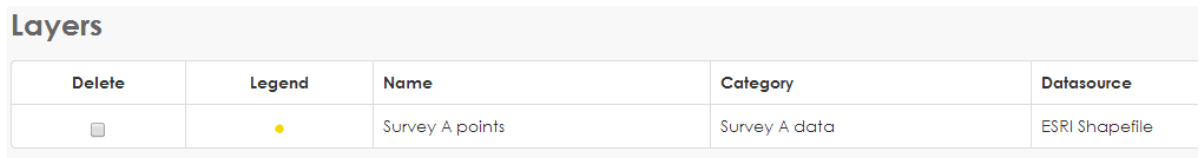


5 Click **Submit.**

6 Once successfully uploaded, you will receive feedback:

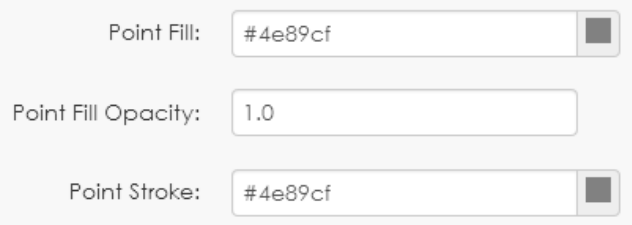


7 The uploaded layer will display in the **Layers** table (most recently uploaded showing first):



8 The layer is given default symbology, to change click **Edit Symbology**.

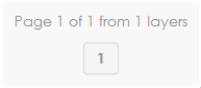
9 From this page you can change colour, outline, opacity and labelling options:



10 Click **Save** when finished with symbology.

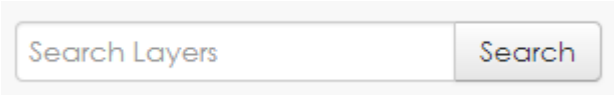
11 To edit the layer properties (i.e. display order, source data or min/max scale) click **Edit Layer** under the **Actions** column.

12 To **Delete** a layer, tick the **delete checkbox** next to a row and click **Delete Layer**.

13 If your layer isn't listed in the **Layers** table, click on a different **page** 

,

14 or **Search** for it by its name,



15 To view your added layers, in the Menu Bar go to **Home**.

16 Click **Add & Edit Data**.

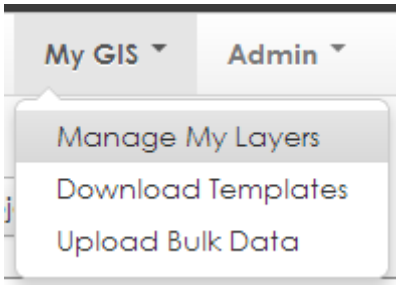
17 Scroll down the page until you see **User Layers**.

18 You can check and uncheck layers as usual to view them in the map display.

19 To edit your layers, in the Menu Bar go back to **My GIS > Manage User Layers** and click **Edit Layer** or **Edit Symbology**.

4.1.2 Upload GPS (.gpx) files to User Layers

1 Click on **Manage User Layers** from the **My GIS** button in the Menu Bar:



2 Click on **Add Layer.**

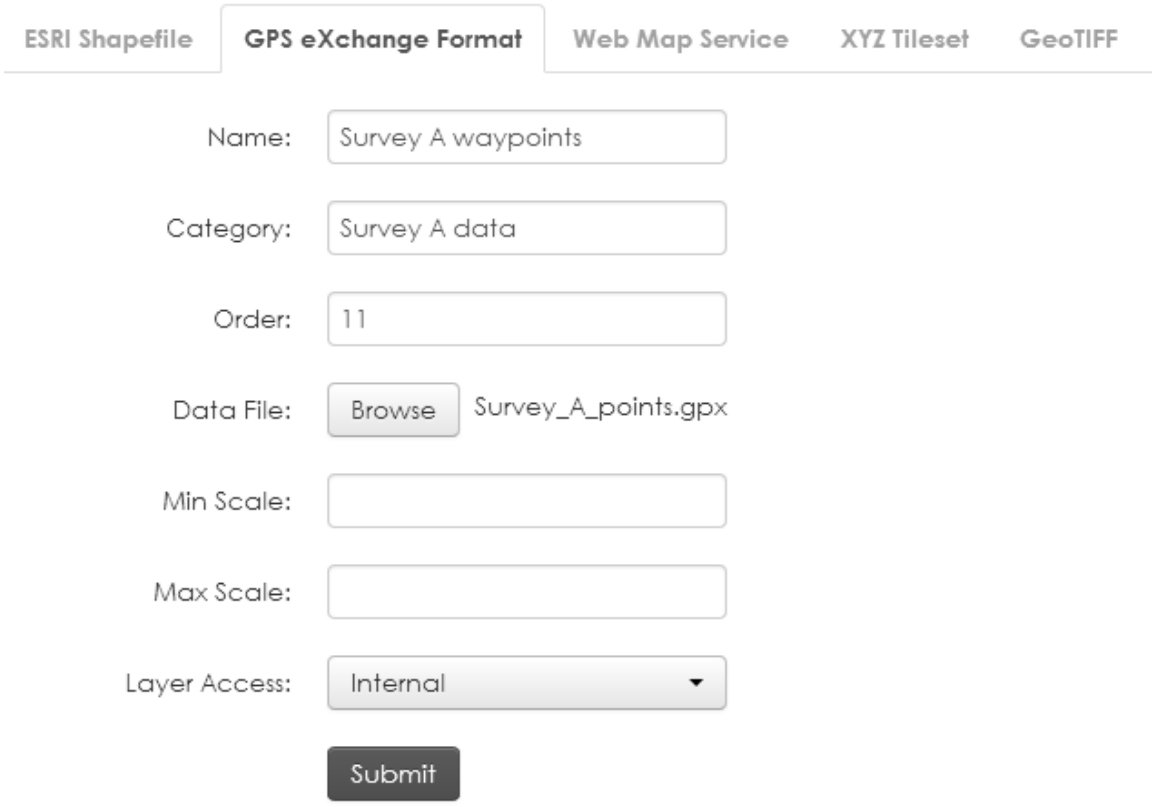
3 Select the **GPS eXchange Format** (.gpx) tab:

4 Complete the following fields:

- **Name** The name for the data you want to see in GRID (i.e. Survey A waypoints)
- **Category** How you want the data to be categorised in GRID (i.e. Survey A data)
- **Order** The order you would like the layers to display in the table of contents under the category specified
- **Data File** Click the **Browse** button and navigate to your **.gpx** file and click **Open**

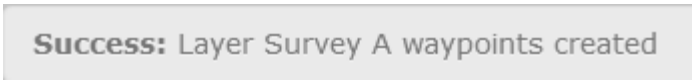
  Your .gpx file name must not contain **spaces** (i.e. "My_waypoints.gpx" not "My waypoints.gpx") or **special characters** (i.e. ~!@#$%^&*()+{}|:"<>?`[]\;',./)

  Ensure all data loaded into User Layers have **unique names**
- **Min Scale** (optional) The minimum scale that you wish your data to display on the map
- **Max Scale** (optional) The maximum scale that you wish your data to display on the map
- **Layer Access:** In **Activity** and **Base Layers**, **Layer Access** defines the levels of user who can see the data. As this option does not have any implications in the User Layers, it can be left as the default of internal (see 6.12 Internal, External and Public permission levels)



5 Click **Submit.**

6 Once successfully uploaded you will receive feedback:



7 The uploaded layer will display in the **Layers** table (most recently uploaded showing first).

8 The layer is given default symbology, to change click **Edit Symbology**.

9 From this page you can change colour, outline, opacity and labelling options:

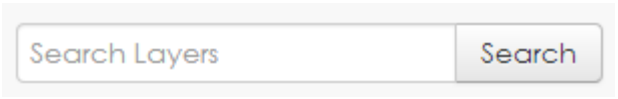
10 Click **Save** when finished with symbology.

11 To edit the layer properties (i.e. display order, source data or min/ max scale), click **Edit Layer** under the **Actions** column.

12 To Delete a layer, tick the delete checkbox next to a row and click **Delete Layer.**

13 If your layer isn't listed in the **Layers** table, click on a different **page**

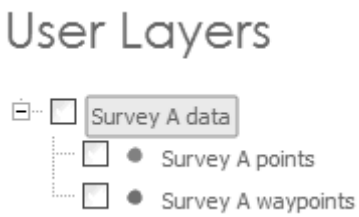
14 Or **Search** for it by its name



15 To view your added layers, in the Menu Bar go to **Home**.

16 Click **Add & Edit Data**.

17 Scroll down the page until you see **User Layers**.



18 You can check and uncheck layers as usual to view them in the map display.

19 To edit these layers, in the Menu Bar go back to **My GIS > Manage User Layers** and click **Edit Layer** or **Edit Symbology**.

4.1.3 Establish Web Map Service (WMS) connection

1 Functionality for advanced users.

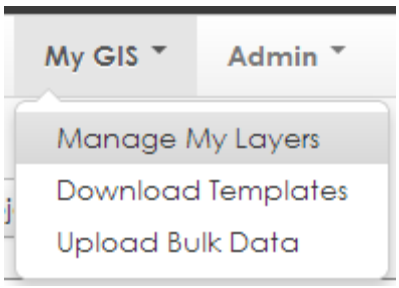
4.1.4 Add XYZ Tileset

1 Functionality for advanced users.

4.1.5 Upload GeoTIFF format (image/ raster)

GRID provides functionality to upload one band rasters (i.e. rainfall) or multiband (i.e. images) in GeoTiff format.

1 Click on **Manage User Layers** from the **MY GIS** menu:



2 Click on **Add Layer**.

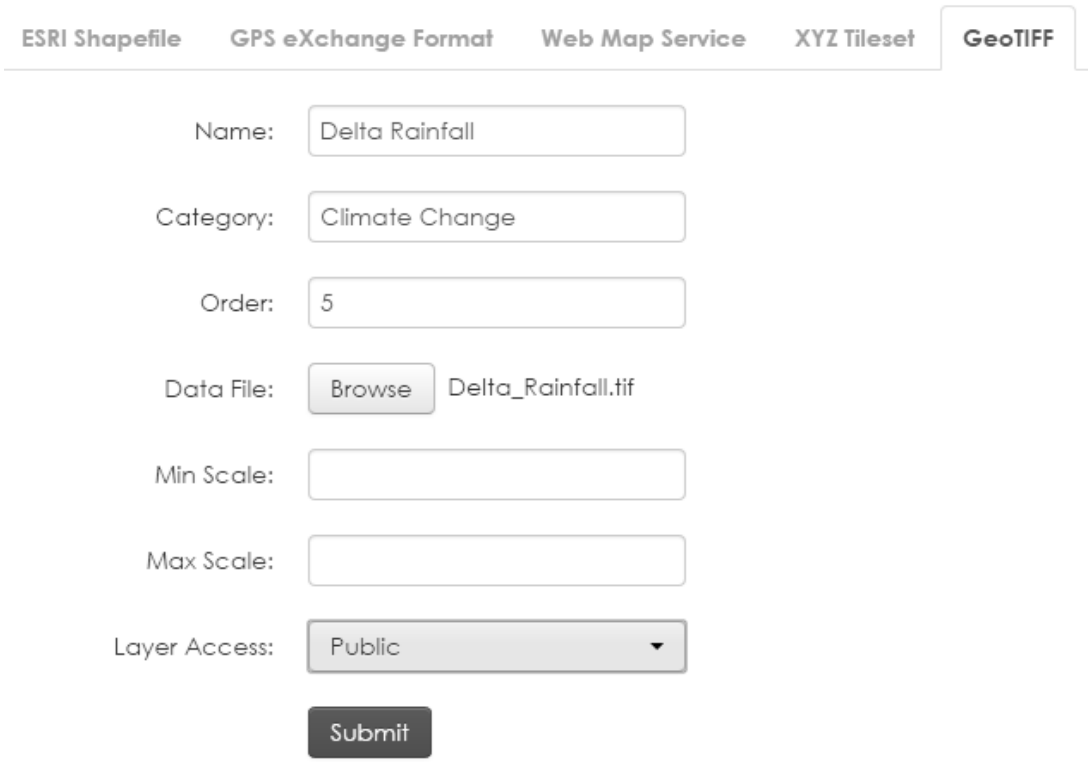
3 Choose **GeoTIFF** from the list of tabs:

4 Complete the following fields:

- **Name** The name for the data you want to see in GRID (i.e. Rainfall)
- **Category** How you want the data to be categorised in GRID (i.e. Climate Change)
- **Order** The order you would like the layers to display in the table of contents under the category specified
- **Data File** Click the **Browse** button and navigate to your **.tif** file and click **Open**

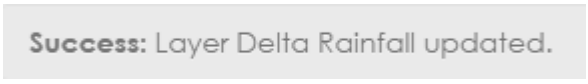
  Your .tif file name must not contain **spaces** (i.e. "Delta_Rainfall.tif" not "Delta Rainfall.tif") or **special characters** (i.e. ~!@#$%^&*()+{}|:"<>?`[]\;',./)

  Ensure all data loaded into User Layers have **unique names**
- **Min Scale** (optional) The minimum scale that you wish your data to display on the map
- **Max Scale** (optional) The maximum scale that you wish your data to display on the map
- **Layer Access:** In **Activity** and **Base Layers**, **Layer Access** defines the levels of user who can see the data. As this option does not have any implications in the User Layers, it can be left as the default of internal (see 6.12 Internal, External and Public permission levels)

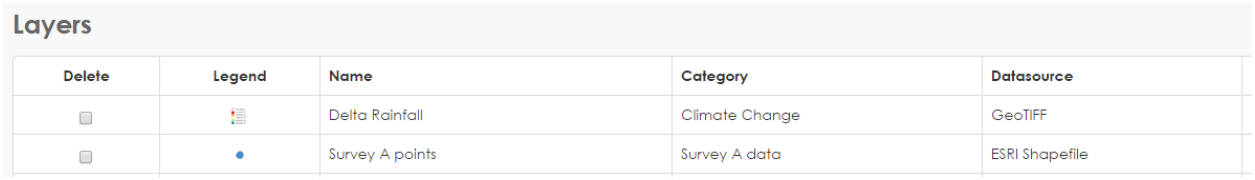


5 Click **Submit**.

6 Once successfully uploaded you will receive feedback:



7 The uploaded layer will display in the **Layers** table (most recently uploaded showing first):



8 The layer is given default symbology, to change click **Edit Symbology**.

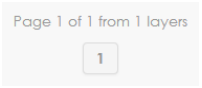
9 From this page you can change the colour ramp, opacity and number of classes (Symbology options change with type of GeoTIFF uploaded - i.e. some GeoTIFFs can have pre-set colours. No symbology is available for multiband rasters such as images):

10 Click **Save** when finished with symbology.

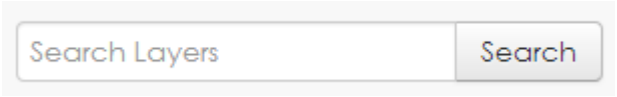
11 To edit the layer properties (i.e. display order, source data or min/ max scale), click **Edit Layer** under the **Actions** column.

12 To delete a layer, tick the delete checkbox next to a row and click **Delete Layer**.

13 If your layer isn't listed in the **Layers** table, click on a different **page**



14 or **Search** for it by its name:



15 To view your added layers, in the Menu Bar go to **Home**.

16 Click **Add & Edit Data**.

17 Scroll down the page until you see **User Layers**.

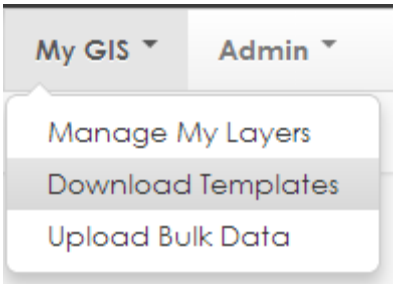
18 You can hover over the legend to enlarge it.

19 You can check and uncheck layers as usual to view them in the map display.

20 To edit your layers, in the Menu Bar go back to **My GIS > Manage User Layers** and click **Edit Layer** or **Edit Symbology**.

4.2 Download templates

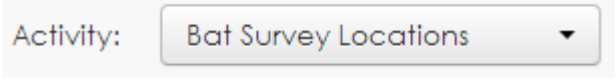
To upload data onto the database you will need to download templates (shapefile or Excel) to enter data into. This ensures data validation (i.e. matching the field requirements of the online database).



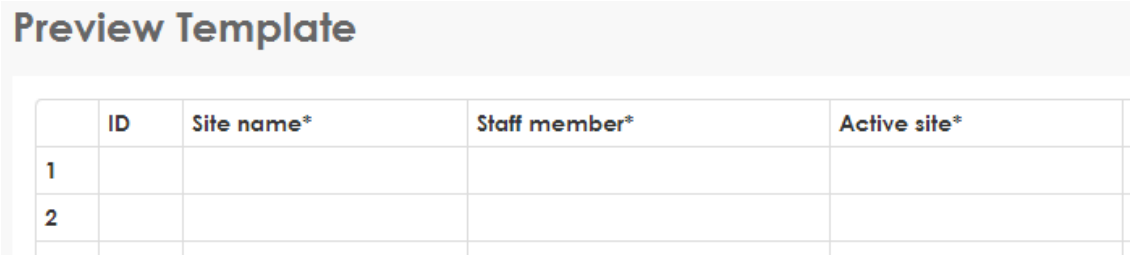
1 Click on **Download Templates** from the **My GIS** menu:

This function allows you to download spreadsheet(s) or shapefile(s) with the required fields to be populated by your existing data.

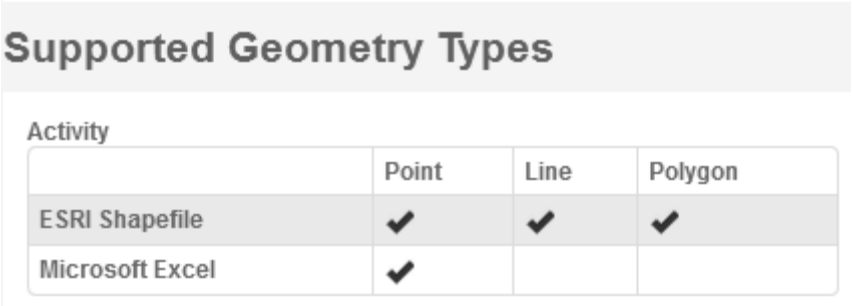
2 Select your **Activity:**



3 A **preview** of the fields for your chosen activity will appear:

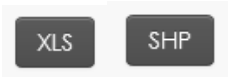


4 The supported **geometry types** (point, line and/ or polygon) for your chosen activity will also appear:



5 Click on the **type of template** you would like to download.

- **XLS**, or Microsoft Excel, is available for point based data only
- **SHP**, or Shapefile, for points, lines and polygons



6 A pop up will appear (Internet Explorer), choose **Save As:**

7 Don't choose Open as the files are zipped.

8 **Save** the template to your project/ working folder.

Note – if selecting a shapefile you will receive a zip file with one or more shapefiles depending on the accepted geometry types. Always unzip the folder before loading the shapefile(s) into your spatial software.

9 Locate the **zip file** you just saved to your working folder.

10 **Right click** on the zip file and **Extract All**.

11 A new unzipped folder will appear in the same folder.

12 The folder will contain the **template shapefile(s)** (or template spreadsheet) and a **Legend.xls** spreadsheet.

13 Go to 4.3 Populating template spreadsheets, if you want to upload a spreadsheet with point locations.

14 Go to 4.4 Populating template shapefiles, if you want to upload shapefiles (points, polylines or polygons).

4.3 Populating template spreadsheets

This section outlines how to populate spreadsheets using point data with eastings and northings or latitude and longitude coordinates.

1 Download the **Template spreadsheet** for your activity (see 4.2 Download templates)

4.3.1 Data Validation for Template Spreadsheets

1 Each Template spreadsheet downloaded comes with a corresponding **Legend.xls** spreadsheet. This spreadsheet shows the field types and values (Selection) required for each field in the Template shapefile:

Name:	Bat Survey Locations			
Geometry:	Point			
Field Name	**Type**	**Mandatory**	**Drop Down Values**	
Site name	String	Y		
Staff member	String	Y		
Active site	Yes/No	Y		
Bats recorded	Yes/No	Y		
Local Government Area	String	Y		

2 Use the rules in **Table 4.1**, along with **the Legend.xls**, when populating the Template spreadsheet attributes:

Table 4.1 Spreadsheet Data Validation Rules for Legend.xls

Field Type/ Validation	Format/ Data Entry Rule	Additional Information
String (Text)	Text field up to 254 characters	
Date	yyyy/mm/dd	e.g. 2014/06/21
Selection	Choose a value for the corresponding field name from Legend.xls	The value entered must match exactly the value given in Legend.xls including format and structure (i.e. "Track" not "track")
Number	Integer or decimal	i.e. 1200 or 1200.00
Image	Imagename.jpg	Can take only one image for each record (can only be .jpg or .png image files)
File	Filename.zip or Filename.pdf	.zip can take multiple images or files when zipped together
Mandatory fields	Must be completed otherwise you will not be able to save your data.	
"ID" field (**CRITICAL**)	**Must** be populated **Must** be a unique integer. **Must** be unique between templates of the same activity.	i.e. 1,2,3…
"Easting" field	Must be an integer	

"Northing" field	Must be an integer	
"Latitude" field	Must be decimal degrees	i.e. 116.4532 -32.56454
"Longitude" field	Must be decimal degrees	i.e. 116.4532 -32.56454

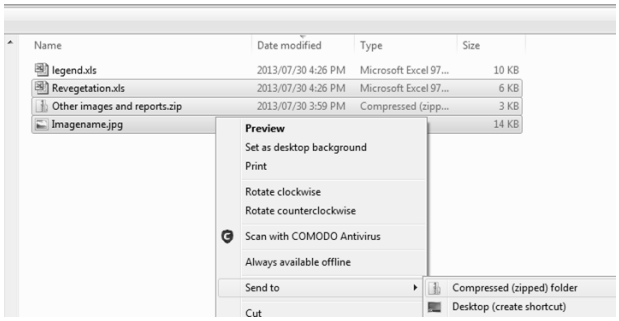
Note: - *Once data is uploaded, "Area" and "Length" fields for polygons and polylines are added and calculated automatically.*

4.3.2 Preparing your template spreadsheet for upload

1 Ensure the Template spreadsheet retains the **same name** as when it was downloaded.

2 **Select all files** that you want to zip together (include shapefile components and any images or other zipped files).

3 Right click, **send to**, **Compressed (zipped) folder**:



Note: Do not put these files in a folder then zip the folder. GRID will not be able to read this type of structured zip file.

4 Give the zipped folder an easily trackable and self-explanatory name (i.e. what specific data you are uploading).

5 The zipped folder must only contain shapefiles/ images/ files for **one activity**.

6 Proceed to 4.5 Uploading your data.

4.4 Populating template shapefiles

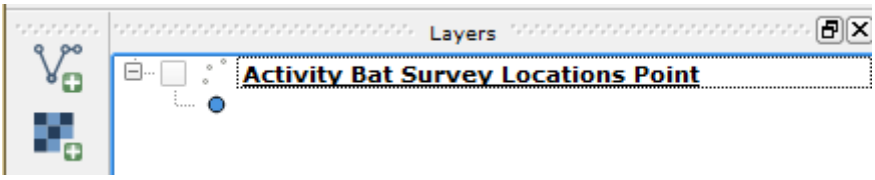
This section outlines how to populate the template shapefile using geometry and attributes from an existing shapefile(s).

4.4.1 Creating new features in a Template Shapefile (QGIS example)

1 Download the **Template shapefile(s)** for your activity (see 4.2 Download templates).

2 Open **QGIS**.

3 Click **Add Vector Layer** and **Browse** to find the **Template shapefile** and click **Open** to add to QGIS as a layer (choose the file with .shp extension):



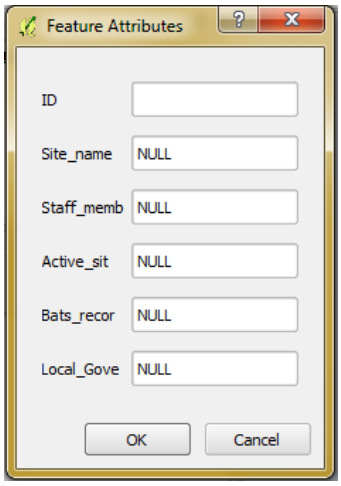
4 Once loaded in QGIS, start an editing session by clicking **Edit** from the top tool bar (ensuring you have first clicked on the layer you want to edit to activate it).

5 Select **Add Feature** (polygon , lines , points depending on the template geometry).

6 For a line or polygon, start **creating** your feature by left clicking vertices on the map canvas. **Right click** to finish the feature (points are just a single click to the map canvas).

7 For a point, select the location you want to record your data.

8 An attributes dialog box will appear. Complete all the **attribute details** you can for the feature (check the legend to see which fields are mandatory):



9 Refer to 4.4.3 Data validation for template shapefiles for **data validation rules** (i.e. the full attribute names, drop down menu options, field types, mandatory fields etc.).

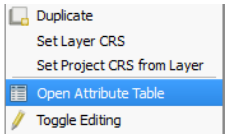
10 Click **OK**.

11 Repeat steps 11 to 15 until all your data is captured.

12 Click **Edit** then **Save** to save all your changes.

13 If you need to edit attributes from the attribute table, right click on your layer name in the table of contents.

14 Click **Open Attribute Table**:



15 Click **Edit** from the attribute table and **double click** on a cell to change the details.

16 Click **Edit** again and **Save** when finished.

17 Continue to 4.5 Uploading your data **to upload** your populated Template Shapefile to GRID.

4.4.2 Data validation for Template shapefiles

1 Each Template spreadsheet downloaded comes with a corresponding **Legend.xls** spreadsheet. This spreadsheet shows the field types and values (Selection) required for each field in the Template shapefile:

Name:	Bat Survey Locations			
Geometry:	Point			
Field Name	**Type**	**Mandatory**	**Drop Down Values**	
Site name	String	Y		
Staff member	String	Y		
Active site	Yes/No	Y		
Bats recorded	Yes/No	Y		
Local Government Area	String	Y		

2 Use the rules in **Table 4.2**, along with the **Legend.xls**, when populating the Template shapefile attribtues:

Table 4.2 Shapefile Data Validation Rules for Legend.xls

File Type/ Validation	Format/ Data Entry Rule	Additional Information
String (Text)	Text field up to 254 characters	
Date	yyyy/mm/dd	
Selection	Choose a value for the corresponding field name from Legend.xls	The value entered must match exactly the value given in Legend.xls (i.e. "Bollard" not "bollard")
Number	Integer or decimal	
Image	Imagename.jpg	Can take only one image for each record (can only be .jpg or .png files)
File	Filename.zip or Filename.pdf	.zip can take multiple images or files when zipped together
Mandatory fields	Must be completed, others can be left blank	Capture as much data as possible
"ID" field (**CRITICAL**)	**Must** be populated **Must** be a unique integer. **Must** be unique between templates of the same activity.	i.e. 1,2,3…

Note: - *Once data is uploaded "Area" and "Length" fields for polygons and polylines are added and calculated automatically*

3 Note that **Field names** for shapefiles will be truncated to 10 characters. If you are unsure of a field name when viewing shapefile attributes, see the corresponding field in the **Legend.xls**.

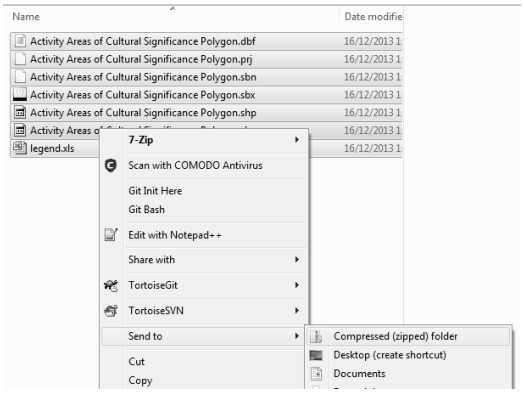
4.4.3 Preparing your Template shapefiles for upload

1 Ensure the Template shapefile has been **removed** from your spatial software (or a lock file will prevent the upload from working).

2 Ensure the shapefile(s) retains the **same name** as when it was downloaded.

3 **Select all files** that you want to zip together (include shapefile components and any images or other zipped files).

4 Right click, **send to**, **Compressed (zipped) folder**:



Note: Do not put these files in a folder then zip the folder. GRID will not be able to read this type of structured zip file.

5 Give the zipped folder an easily trackable and self-explanatory name (i.e. what specific data you are uploading).

6 The zipped folder must only contain shapefiles/ images/ files for **one activity**.

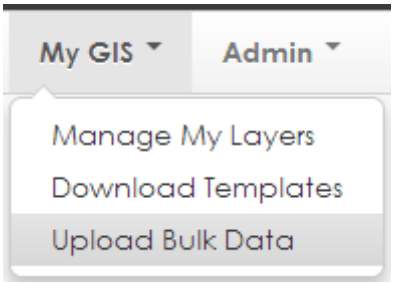
7 The zipped folder must contain **ALL** the template shapefiles for the one activity, even if they are blank (i.e for example, some activities have templates for different geometry types).

8 Proceed to 4.5 Uploading your Data.

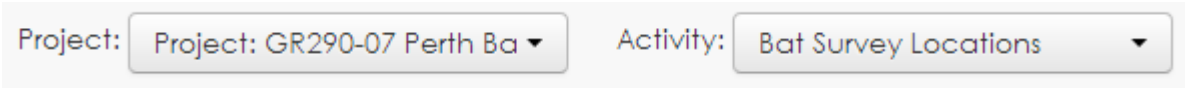
4.5 Uploading your data

1 Read through 4.3 Populating template spreadsheets (spreadsheets) or 4.4 Populating template shapefiles to ensure all data validation rules have been adhered to.

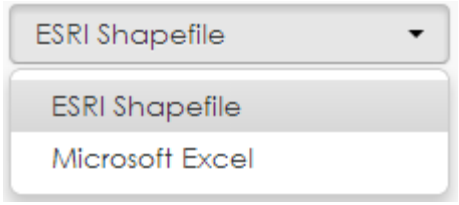
2 Click on **Upload Bulk data** from the **My GIS** menu item:



3 Select your **Project** and **Activity**:



4 Select your **Format** of the file that you are uploading:



5 Select **Browse** and navigate to your file to be uploaded. Once selected click **Open**. If uploading a shapefile ensure all the files are contained in a **zipped file** - for a successful upload all shapefile templates originally downloaded for an activity must be in the final zipped file (even if they are blank).

6 Click **Upload**.

7 If the data does not validate correctly, you will receive an error message explaining the issue, and the offending record will appear:

Note: Error messages are usually descriptive to what the issue is.

8 It is good practice to delete the zip file that failed.

9 Correct the error(s), zip the files again, and retry the upload. Common mistakes when uploading are:

- Data in the zip file is contained within a folder
- Data in the zip file do not contain all the shapefile templates (if the downloaded data template contains 3 shapefiles, all 3 shapefiles need to be uploaded - even if empty)
- The template shapefile name has been changed (this name needs to be the same as the downloaded template name)
- The shapefile fields/ columns are different from the template (sometimes this occurs when a template has been updated, but a user has an old version of the data)
- Mandatory fields within your data have not been completed
- Selection fields in your data do not contain the values as specified in the data's legend.xls

10 You will receive feedback when the upload has been successful.

5. MAPPING AND REPORTING

1 From the **Home** page click on **Mapping and Reporting**:

5.1 Export spreadsheet or shapefile report

1 From the **Mapping and Reporting** page click on **XLS Export Report** or **Shapefile Export Report** (shapefile reports cater for all activities, XLS reports only cater for point based activities).

2 Select a **Project** and **Activity** from the drop down list:

3 Click **Export** (for shapefiles you can export all activities for a Project by checking **All Activities**).

4 A pop up will appear (Internet Explorer), choose **Save As**:

5 Navigate to your project folder and click **Save.**

6 The downloaded folder will be a .**zip file**.

7 To unzip, **right click** on the file.

8 Choose **Extract All**.

9 The unzipped folder will appear in the same folder as the original zipped file.

10 Along with your exported shapefile or spreadsheet activity report, you will also receive a spreadsheet called **Legend.xls** which explains the different field types and drop down values for the activity.

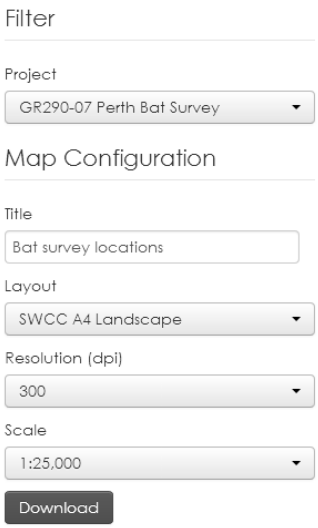
5.2 Export map (to PDF)

1 From the **Mapping and Reporting** page select **Map Report**.

2 **Navigate** to the area you would like to map.

3 **Select the layers** you would like displayed from the **Table of Contents**:

4 Fill in the options under **Map Configuration**:



5 Select the **Project** you would like to map (or leave blank if across multiple Projects).

6 Give the map a **Title**.

7 Select a map **Layout** (**A4 portrait** and **A4 landscape** are available as standard).

8 Only the landscape layout has an **inset** map.

9 Select a **Resolution** (dots per inch).

10 Choose a **Scale**.

11 You will see an orange box (showing **export map extent**) with blue nodes.

12 If the entire map viewer is orange, choose a smaller scale until the nodes come into view.

13 Choose the scale that best suites the data that you would like to map (scale sizes are preconfigured in the GRID system):

14 You can also change the size of the map extent by dragging the nodes.

15 You can move the entire map extent by clicking and dragging.

16 Once all your options are set click **Download**.

17 A pop up will appear (Internet Explorer), choose **Save As**.

18 Save the **pdf** to your project folder.

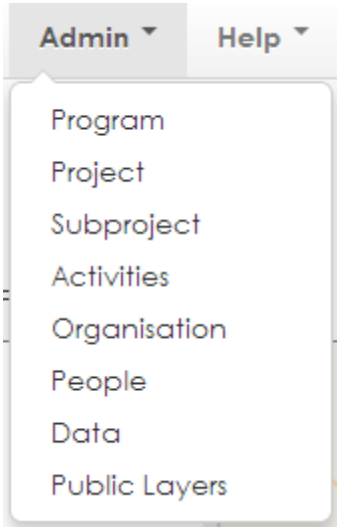
Useful tip: you can take a screenshot of the data in the **Add & Edit Data** and **View Data** web maps by clicking on the **Export to image** hyperlink on the bottom left hand corner of the map:

6. ADMINISTRATION FUNCTIONS

This section outlines the process flows for the administrator for GRID. Administrators can change certain core elements in GRID such as the Programs, Projects and Subprojects, Activity Layers, Organisations, Users, Base Layers and Public Layers.

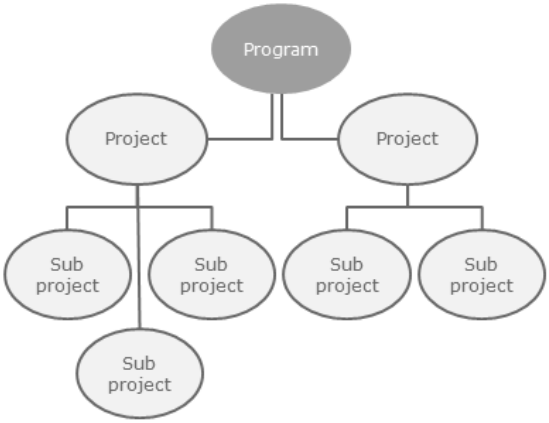
As the above items can change the structure of GRID, the administrator should take care when amending items. Once saved, any changes are final.

Administrators will have access to an additional navigation menu button named **Admin**:



6.1 Add a program

Programs are found within the following GRID structure. Programs are funding based and group projects together. They don't filter, sort or categorize activities in any way. You cannot export data based on a program. They are more entered as an overarching category.



1 Click **Admin** and **Program.**

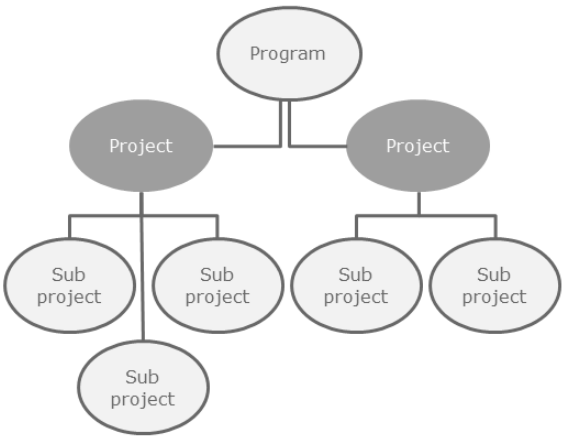
2 Add the details of your program.

3 If the program is external (i.e. completed by an external organisation), tick the External checkbox. This will then allow you to select an organisation from the Organisation drop down list. If your organisation is not on the list, you will need to add it in. See 6.5 Add an organisation.

4 Click **Save.**

6.2 Add a project

Projects are found within the following GRID structure. In GRID, activity data is saved into a specified project or subproject. You can export out activities in GRID by project or subproject.



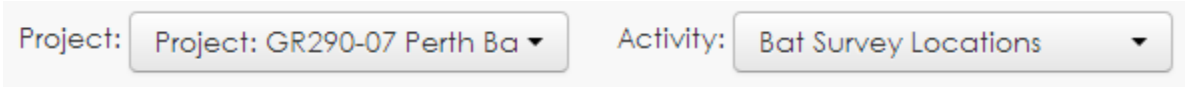
1 Click **Admin** and **Project**.

2 Add the details of your project.

3 Add an indicative project boundary in the webmap.

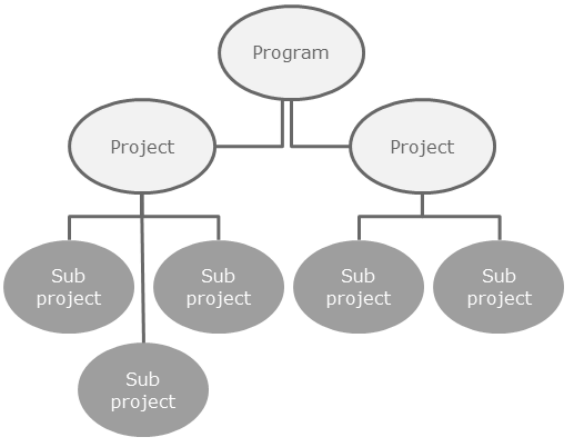
4 Click **Save**.

This project will now be added to the project drop down in the **Add & Edit data** page:



6.3 Add a subproject

Subprojects are found within the following GRID structure. In GRID, activity data is saved into a specified project or subproject. You can export out activities in GRID by project or subproject. Project and subproject are considered separate entities and not linked. If you would like to export out a project and all its subprojects, you will need to do this individually.



1 Click **Admin** and **Subproject.**

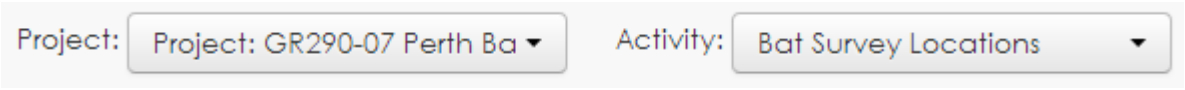
2 Add the project that your subproject is found within.

3 Add the details of you subproject.

4 Add an indicative subproject boundary in the webmap.

5 Click **Save.**

This subproject will now be added to the project drop down in the **Add & Edit data** page:



6.4 Add an activity

Activities are how you capture data within GRID. They have set geometry, field structures and symbology, all which can be added or amended by the administrator.

1 To add an activity, go to **Admin** and **Activities**.

2 Under **Setup Activity**, fill out the activity details:

- **Name**: The Activity name that will be used in GRID.
- **Category**: The category that your activity will be grouped under.
- **Geometry Type**: The geometry type of the activity (a point, a line or a polygon). Please note that an activity layer can have more than one geometry.
- **Layer Access**: What type of user will be able to see and add to this activity.

  Internal: Only Internal users have access to this activity.

  External: Internal and External users have access to this activity.

  Public: The layer can be seen externally on a website. Also both Internal and External users have access to this activity.

  More details on users can be found in 6.9 Public Layers.
- **Order**: The order in which the activity layer will show in regards to all the other layers in GRID - 1 indicates the very bottom layer. If layers have the same order, GRID will randomly select one to show above the other.

3 Under **Activity Fields**, create the fields you would like to capture details of the activity. You must fill out all the details for the activity to be saved.

To add a new field, click **Create New Field** and fill out the details:

Name: The name of your field. Keep in mind that when exporting to a shapefile, only the first 9 characters will be used in the field.

Description: A longer description of the field.

Required: If ticked, it means that the field is mandatory and cannot be saved or uploaded until this field is completed.

Type: The type of field. The different options are:

File Type/ Validation	Format/ Data Entry Rule
String (Text)	Text field up to 254 characters
Number	Integer or decimal

Selection	A selection or drop down of values that the user must select from.
Date	A calendar date
Yes/No	Either a yes or no field
Image	Ability to upload an image (in jpeg or png format)
File	Ability to upload a zip file.
Auto Increment	Will add an incremented ID to the field. Requires a prefix (i.e. WP)

- **Activity Type**: Choose your activity type.

  Activity Schema: This is the default setting for GRID.

  Record Schema: This is an advanced setting and should not be used.

- **Options**: This is where selection field values are added. This field can only be used if **Type: Selection** is selected.

  Add your values separated by a comma.

  i.e. Aerial, Ground.

- **Delete**: Tick this box if you want to delete the field.

4 Once all fields are added, click **Save and Setup Symbology.**

5 Amend the symbology (or shape and colour) and label for your activity.

6 Click **Save.**

6.5 Add an organisation

Organisations are used as a drop down list for various other admin functions within GRID such as users and programs. To add an organisation:

1 Click on **Admin** and **Organisation**.

2 Click **Add New Organisation**.

3 Complete the details.

4 If the organisation is external (i.e. a consulting company) please check the external check box. This level of external is not related to user or data access.

5 Click **Save.**

6.6 Add a new general user

To add a new user to GRID:

1 Click on **Admin** and **People**.

2 Click **Add New User**.

3 Complete the details.

4 For Organisation, choose a value from the drop down box. If your organisation is not on the list, you will need to add it in. See 6.5 Add an organisation.

5 If the user has an expiry date, ensure you complete the Start and End dates. (If they don't these can be left blank).

6 Tick the **Is External** box if they are an External User. External Users have different access to Internal - see 6.12 Internal, External and Public permission levels for GRID.

7 If the user is active (still using GRID), tick the **Active** checkbox. Unchecking this box will archive the user and they won't be able to login but their data will remain in the database.

8 Ticking the **Email this person with their login details** will send the user an email once you click **Save**.

9 Click **Save**.

6.7 Add a new administrator

To add an additional administrator, please ring your GRID contact at Gaia Resources.

6.8 Add new baselayer data

To add a new Base Layer:

1 Click on **Admin** and **Baselayers**.

2 Click **Add Layer**.

3 Click the tab you require based on your data format :

4 Fill out the details for your data. Explanations of all fields found in ALL data formats are below:

- **Name**: The baselayer name that will be used in GRID.
- **Category**: The category that your activity will be grouped under.
- **Order**: The order in which the baselayer will show in regards to all the other layers in GRID - 1 indicates the very bottom layer. If layers have the same order, GRID will randomly select one to show above the other.
- **Data File:** Browse for the location of your data.
  - Data must be in zipped format for shapefiles.
  - Data must be in a GPX format for GPS outputs.
- **Data URL:** The URL of your Web Map Service or XYZ tileset.
- **Is Spherical Mercator**: If checked, the XYZ tileset is Spherical Mercator.
- **Min Scale:** The minimum scale you would like your data to show in the GRID map.
- **Max Scale:** The maximum scale you would like your data to show in the GRID map.
  - Keep these values empty if you want to see the data at all scales.
- **Layer Access**: What type of user will be able to see and add to this activity.

  Internal: Only Internal users have access to this activity.

External: Internal and External users have access to this activity.

Public: The layer can be seen externally on a website. Also both Internal and External users have access to this activity.

More details on users can be found in 6.12 Internal, External and Public permission levels in GRID**.**

5 Click **Submit**.

6 Layers can be deleted by selecting them from the table and clicking on **Delete Layer**.

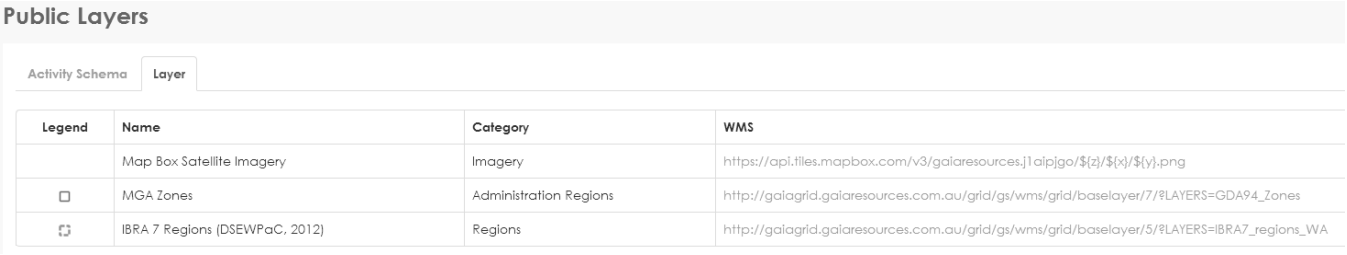
7 To specifically upload GPS eXchange format go to **Admin**, **Baselayers** and follow from 4.1.2 Upload GPS.

8 To upload GeoTIFFs (image/ raster) go to **Admin, Baselayers** and follow from 4.1.5 Upload GeoTIFF format.

9 Web Map Service and XYZ Tilesets are for advanced users.

6.9 Public Layers

If you have allocated your activity or baselayer data as public, the Web Map Service (WMS) URL will appear on this page. This URL can be used in external websites to show your data on a web map.



6.10 Amend a program, project, subproject, activity, organisation, user or baselayer

To amend any of the data already entered:

1 Click on **Admin** > ***The item you want to amend***.

2 In the search bar to the top right, enter the details of the item you would like to change and click **Search**.

If you want the full list, just click **Search**.

3 In the **Search Results** pop up, select the item you would like to amend.

4 Update the details and click **Save**.

6.11 Change the symbology or labels of an activity or baselayer

To change the symbology of an activity:

1 Click on **Admin** and **Activities**.

2 Find your activity in the table and click **Edit Symbology** or,

3 In the search bar to the top right, enter the details of the item you would like to change and click **Search**.

If you want the full list, just click **Search**.

4 In the **Search Results** pop up, select the item you would like to amend.

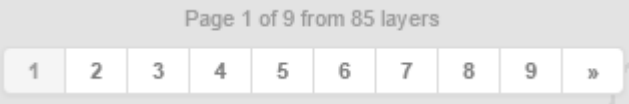
5 Scroll to the bottom of the page a click **Save and Setup Symbology**.

To change the symbology of a **Baselayer**:

6 Click on **Admin** and **Baselayers**.

7 Find your activity in the table and click **Edit Symbology**.

8 If there are more than 10 layers they will be tabulated.



9 Click on **Edit Layer** under Action **in the table**.

10 Update the symbology to suit your needs. Terminology for symbology is explained below:

Fill: The colour of the polygon area or point (ensure hex number starts with a #).

Stroke: The colour of the line or boundary (ensure hex number starts with a #).

Opacity: How non-transparent you want the shape to be (0.01 is highly transparent, 1 is solid).

Width: The thickness of the line.

Stroke Linejoin: Options regarding the smoothness of the corners.

Stroke Linecap: Options regarding the smoothness of the edge of lines.

Stroke Dasharray: The pattern for dash or dot patterns for lines.

Stroke Dashoffset: The offset for the pattern to the right along the line.

11 Add labels by choosing the **Polygon Label Text** field under the **Label Style**.

12 Leave label settings as default or change as required.

Note: Pressing **L** on the keyboard will turn all labels on and off in **the Add & Edit data** and **View Data** pages.

6.12 Internal, External and Public permissions levels for GRID.

Internal, external and public is used in GRID for defining access and user type. A table explaining how these definitions effect GRID users can be found below.

GRID page	Options	What it does	Pre-requisites
Add User	Is not External	Considered "**Internal User**". Can view all Base Layers and Activity Layers. Can edit all Activity data. Does not have administrator rights.	Requires "Organisation"
	Is External	Considered "**External User**". Can view only "External" and "Public" defined Base Layers. Can only see the Activity Layers deemed "External" or "Public" in the table of contents. Can only see, add and edit their own data. Does not have administrator rights.	
Base Layer	Internal	Baselayer data is accessible and viewable only to "**Internal Users**".	

GRID page	Options	What it does	Pre-requisites
	External	Baselayer data is accessible and viewable to "**Internal Users**" and "**External Users**" (all GRID users).	
	Public	Baselayer data is accessible and viewable to "**Internal Users**" and "**External Users**" (all GRID users), and accessed publicly via an external webmap.	
Activity Layer	Internal	Activity layer is accessible only to "Internal Users". "**Internal Users**" can see the layer in the table in contents. They can view and edit all data, and add their own data into the Layer.	
	External	Activity layer is accessible to "Internal Users" and "External Users" (all GRID users). "**Internal Users**" can see the layer in the table of contents. They can view and edit all data, and add their own data into the Layer. "**External Users**" can see the layer in the table of contents. They can view, edit and add only their own data into the layer.	
	Public	Activity layer is available to all users in GRID, and publicly via the webpage map. "**Internal Users**" can see the layer in the table of contents. They can view and edit all data, and add their own data into the Layer. "**External Users**" can see the layer in the table of contents. They can view, edit and add only their own data into the layer.	
The below have been separated as the definitions do not affect users or determine how layers are shown.			
GRID page	Options	What it does	Pre-requisites
Add Organisation	Is not External	Considered an internal staff member or similar.	
	Is External	An external organisation, such as a consultant.	
Add Program	Is not External	Considered an internal program. Under organisations, no drop down options are given. All GRID users are able to access both "Is not External" and "External" programs.	Requires "Organisation"
	Is External	Considered an external program completed by an external organisation. Under organisation, drop down list contains organisations classed as "Is External". All GRID users are able to access both "Is not External" and "External" programs.	

7. FURTHER HELP AND SUPPORT

GRID Administrator Support

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